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Subject: Etofenprox Technical (EPA Reg. No. 86203-4)
Conditional Studies for Rice and Vector Control Use

On behalf of Mitsui Chemicals Agro, Inc. please find additional Etofenprox Technical studies (EPA Reg. No. 86203-4) required for Rice and Vector Control Use as per EPA letters dated August 15, 2008 and December 8, 2008. This submission completes the list of conditional studies that were required as conditions of registration for Etofenprox Technical. Please find enclosed the following:

- EPA Form 8570-1 Application for Registration
- EPA Form 8570-35 Data Matrix – Agency Use Copy
- EPA Form 8570-35 Data Matrix – Public Use Copy
- Three copies of each of the following:

Title	OPPTS Guideline	MRID No.
Amended Final Report: Aquatic Field Dissipation of Residues following Application of Etofenprox to Water (Landis Study No. 43421A026) Original Report MRID 47132846	835.6200	48628801
Response to the Environmental Chemistry Method Review Report (In support of MRID 46779716)	NA	48628802
^{14}C-Etofenprox Adsorption/Desorption on Soil (IES Study No. 81801015)	835.1230	48628803
4'OH Adsorption/Desorption on Soil (IES Study No. 81802015)	835.1230	48628804

The Aquatic Field Dissipation of Residues report (MRID 47132846) has been amended to include relevant details for sample storage intervals and relative details of findings from a separate storage stability study conducted by Wildlife International (MRID 47132827). Originally, the sample storage intervals were not made explicitly clear which caused some uncertainty about the applicability of proven storage stability of frozen samples. The study author stated that samples were stored for a maximum of 170 days after sampling, which was somewhat misleading. Only a small number of samples were analyzed at this maximum (170 day) storage interval, and the vast majority of samples were analyzed less than 139 days after sampling. The study report has been amended to reflect the storage intervals for all pertinent field samples (Tables 4, 5, 7 and 8). Essentially, only four of the field samples were stored

longer than the proven storage stability interval.
In summary:

Sample Matrix	Study Location	Sample Storage Length
Sediment	California	91 – 140 days
	Arkansas	76 – 138 days *
Soil	California	45 days
	Arkansas	37 days
Water	California	56 – 140 days
	Arkansas	68 – 140 days

* Four of the 45 individual samples were re-analyzed due to anomalous results obtained for the initial analysis. The re-analysis resulted in a maximum storage interval of up to 172 days.

An independent measurement of the frozen storage stability was performed by fortifying field samples. These field quality control samples (pp. 111 – 112, Table 5 of the analytical report MRID 46779716) confirmed the storage/transport stability for etofenprox and alpha-CO in sediment (maximum interval of 143 days), and confirmed a measurable change for 4'-OH (37% decline) in sediment during the same interval. Field fortifications of water showed no significant change for etofenprox, alpha-CO or 4'-OH during the same storage period (maximum of 143 days).

The data included in the separate storage stability study conducted by Wildlife International (MRID 47132827) indicates stability was confirmed for 139 days in water, for 117 days in sediment and for 130 days in soil. Sediment was essentially wet soil in this study; therefore, a high level of congruency is expected for the results demonstrated for all three matrices. In addition, the authors concluded that: "The absence of any significant difference in the magnitude of etofenprox and alpha-CO recovered at [130, 117, and 139 days] versus an intermediate interval for each substrate [88, 75 and 97 days] indicate that etofenprox and alpha-CO would be stable in soil, sediment and water for storage periods greatly exceeding those measured." We propose that a frozen storage stability of etofenprox and alpha-CO has been adequately demonstrated in soil, sediment and water for a period of 139 days.

In contrast, this study (MRID 47132827) demonstrated a measurable dissipation/decomposition of 4'-OH in soil, sediment and water during frozen storage. An approximate 30% decline in soil and sediment was measured in the first storage interval (75 – 88 days), but no additional decline was observed during the subsequent storage interval (117 to 130 days). Following 139 days in storage, 4'-OH declined by approximately 43% in frozen fortified water samples.

As requested by the Agency, adsorption/desorption in soil studies were repeated for etofenprox and 4'-OH and are included in this submission.

If you have any questions or need additional information, please do not hesitate to contact us at any time (lsetliff@landisintl.com) or via telephone 609-614-7146.

Sincerely,

Lisa Ayn Setliff

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